

# AFTER THE ICE...

## Polar Ice as a New Arena for Conflicting Interests and Social Research



*Igor Krupnik,  
Smithsonian Institution,  
NIC-5, 18 July, 2013*

# Arctic ice as a 'cultural scape' for polar indigenous people



Today's hunters test the ice off Igloolik, Canada. Photo: Claudio Aporta, 2003



A Yupik hunter on the shore-fast ice off the village of Ungaziq in Chukotka, 1929

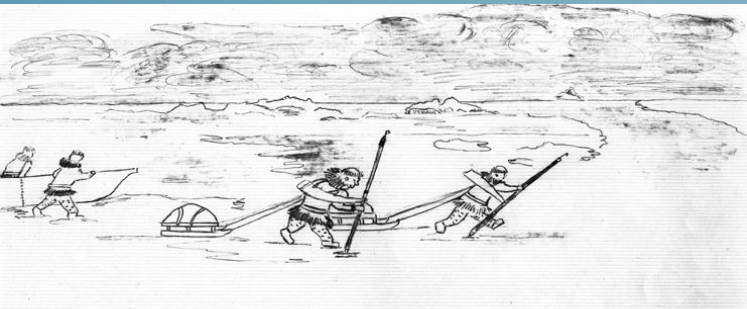


Photo: Aleksandr Forshtein, Museum of Anthropology and Ethnography, St. Petersburg, Russia

# Sea ice as a familiar space



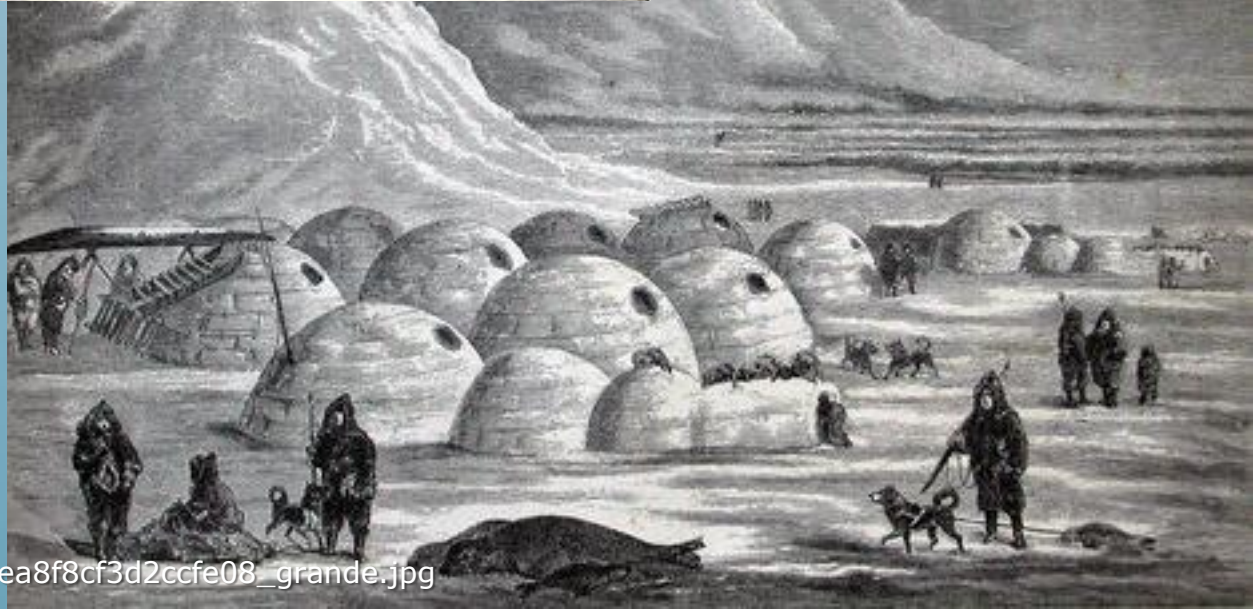


# Ice as a Home...



"Aua's spring ice camp of snow houses" (Knud Rasmussen, "Across Arctic America," 1927)

Traditional winter camp of the Canadian Inuit of snow houses on the shore-fast ice





# Knowing our ice



Inuktitut place names along traditional trails and traveling routes between Iglulik and Arctic Bay



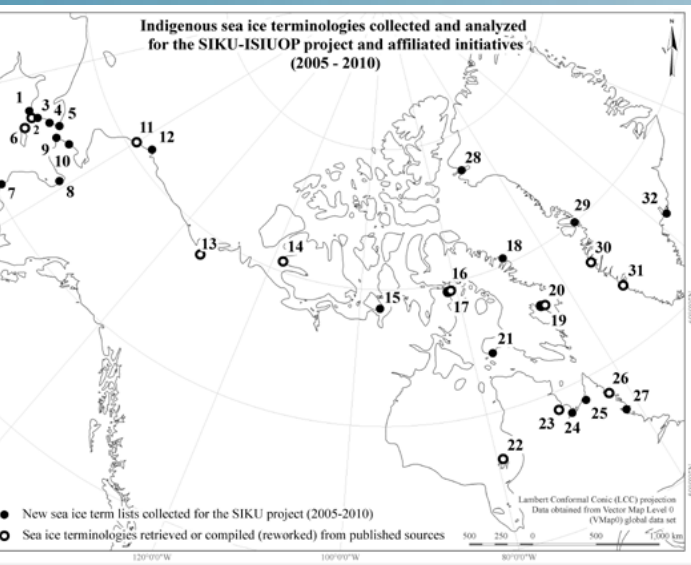
From: J. Wisniewski, "Knowing about Sigu" (2010)

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"Eskimo Mermaid" (*kununigaq*) pictured by Inuit artist James Kivitoruk Moses (1900–1982). In various parts of the Arctic, community knowledge includes information on such supernatural creatures, like big worms, dwarfs, and wild giants that live on or under the ice



# Indigenous Sea Ice Terminologies



*Kinikmi Sigum Qanuq Ilitaavut*

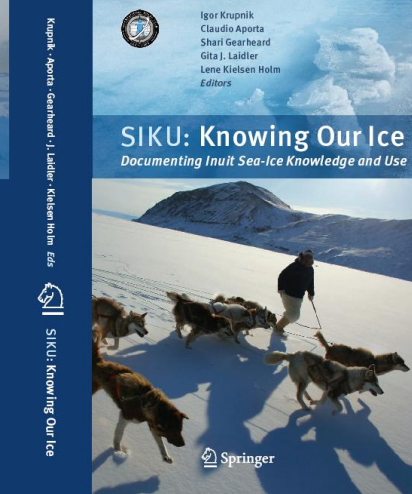
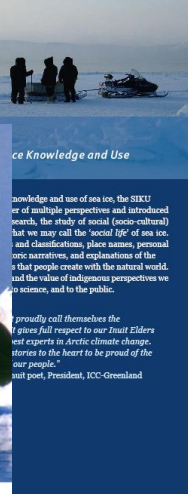
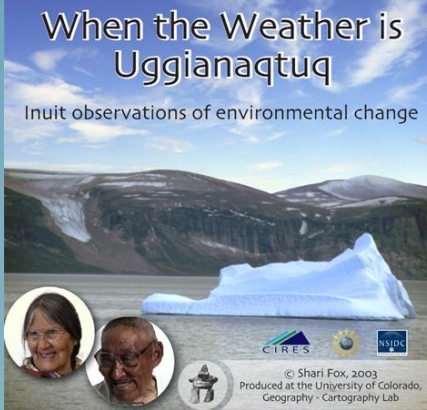
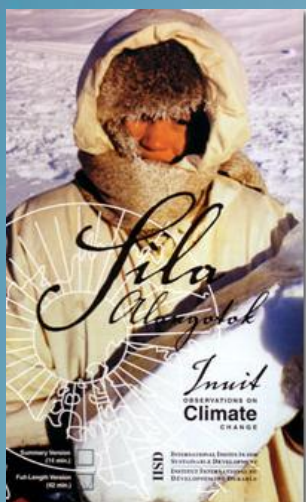


*Wales Inupiaq Sea Ice Dictionary*

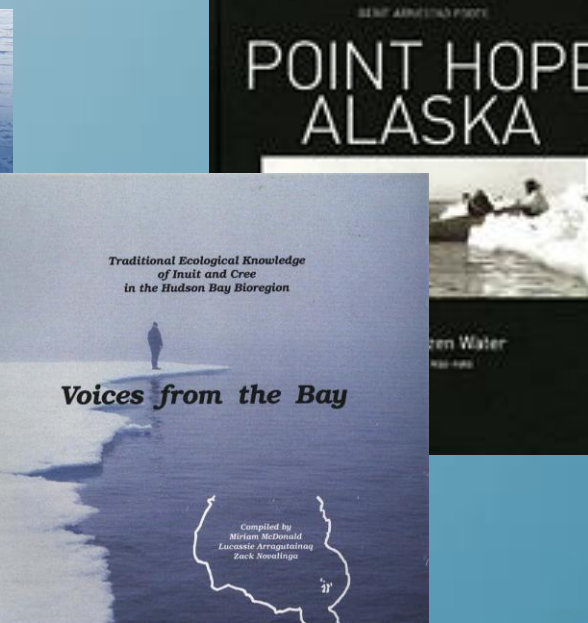
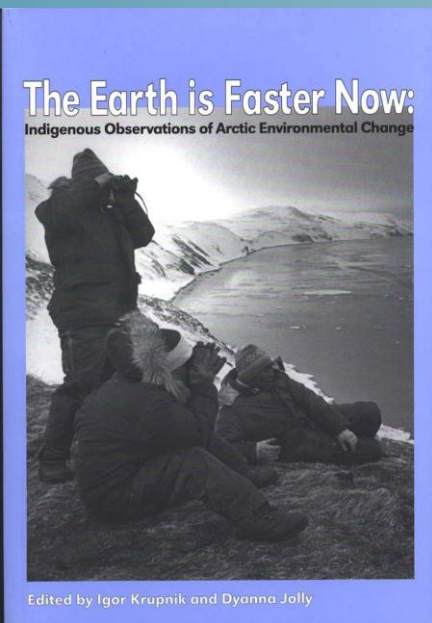
Top: Over 30 indigenous sea ice terminologies have been recorded for the SIKU project in 2007–2010.

Right: The 'Wales Inupiaq Sea Ice Dictionary' (2012) has over 100 ice-related terms in the dialect of Kingikmiut, the People of Wales, Alaska



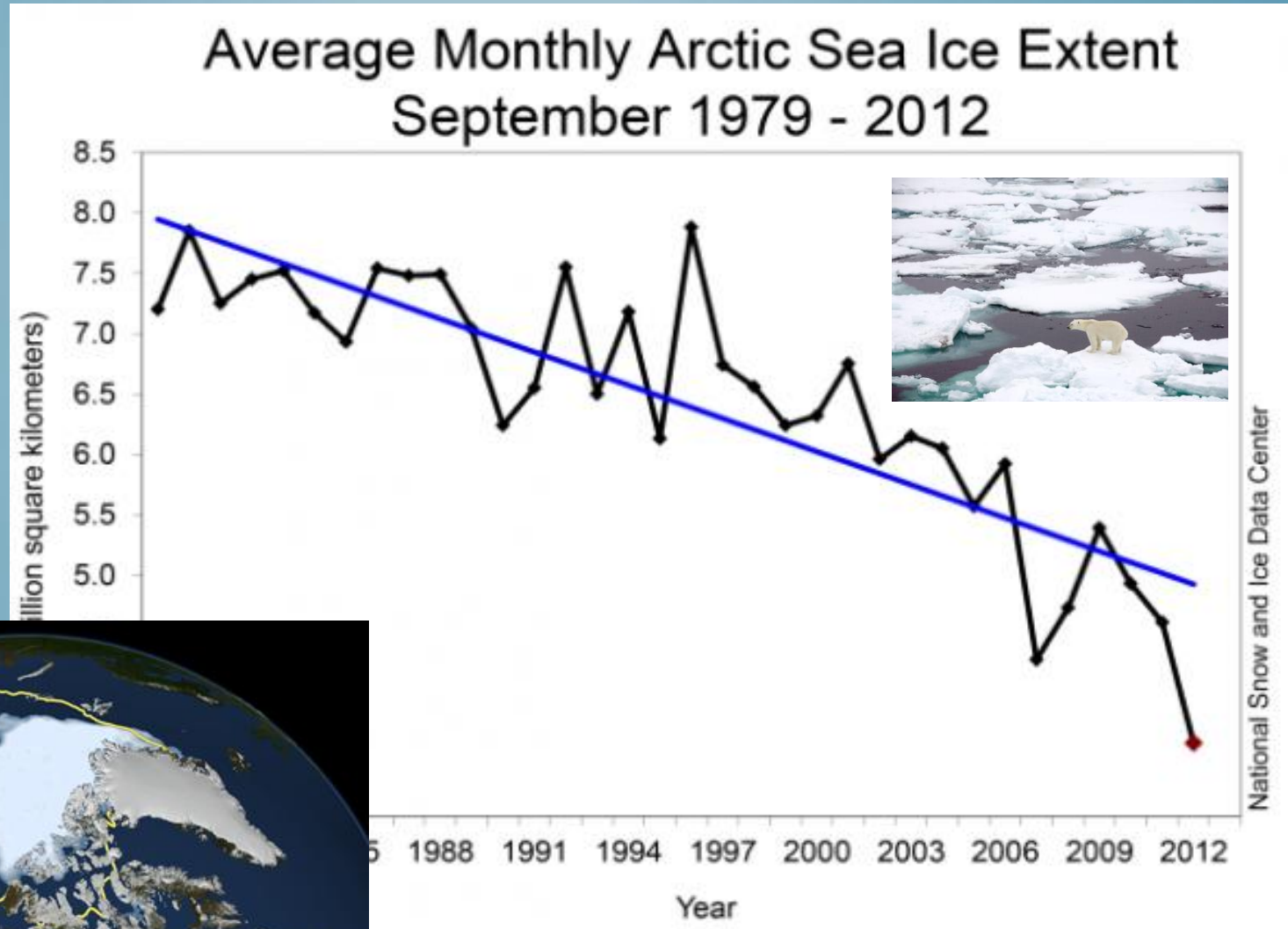


# Treasures of Local Knowledge about ice and climate change

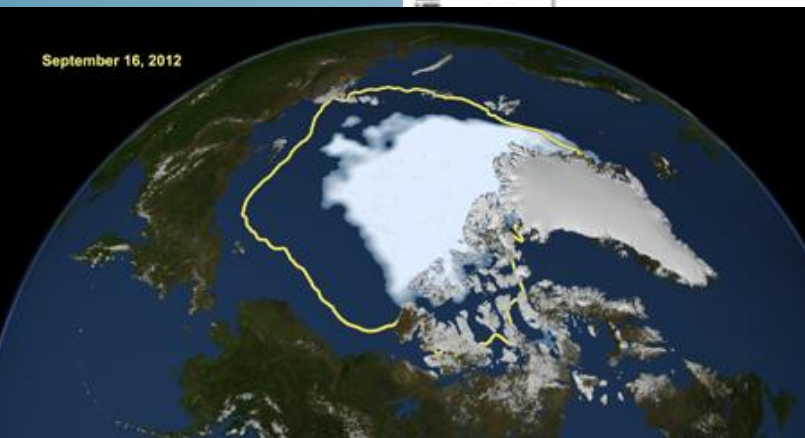




# Arctic Warming: It's Everybody's Bell !

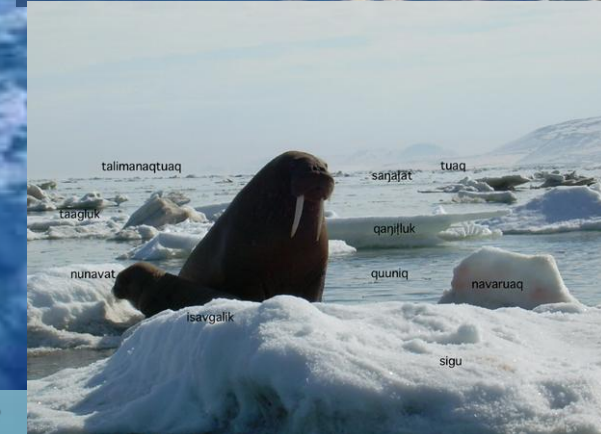


September 16, 2012



2012 sea ice minimum

<http://svs.gsfc.nasa.gov/vis/a000000/a003900/a003998/index.html>



Without a human touch, the frozen sea turns into a mass of cracks, hummocks and ridges, a cultural desert, the 'wild ice'



# Non-indigenous ice scapes

Ice scape created by the "Fram" sailors during their Arctic drift in 1893–1896

<http://www.ub.uit.no/northernlights/Images/nansen01d.jpg>



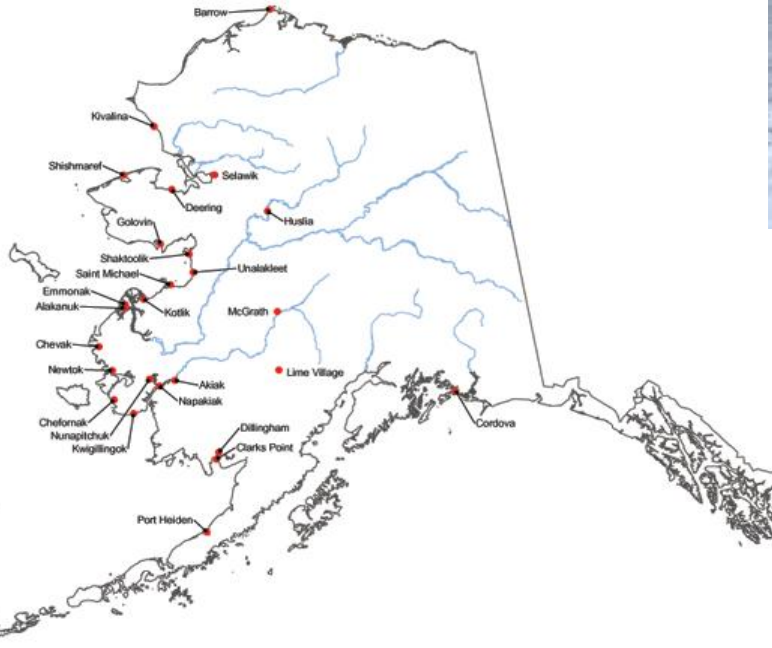
(Below) The crew of HMS *Terror* icebound in the Arctic prepares the ship for safe wintering

<http://www.thearcticinstitute.org/2011/10/34358679-search-for-sovereignty.html>



# Sand-bagged and doomed without the ice protection

A Priority Action Community has reported erosion threatening the viability of the community and/or significant resources are being expended to minimize threats to the community's viability. The erosion issue likely warrants immediate and substantial Federal, State, or other intervention. Priority Action Communities should be considered for immediate action in either initiating an investigation or continuing with ongoing efforts to manage erosion issues.



Alaska District  
Corps of Engineers  
Civil Works Branch

## Alaska Baseline Erosion

Date Prepared: March 24, 2009

**Figure 4-1**  
**Priority Action Communities**



<http://www.nytimes.com/2010/01/27>

26 Native Alaskan communities are declared as 'high-risk'; some are literally sand-bagged



<http://www.theatlantic.com/magazine/>

12 communities have already decided to relocate to higher ground at enormous estimated cost: \$95-125M for Kivalina (population 374), \$80-130M for Newtok (population 354), \$100-200M for Shishmaref (population 563), about \$2M per household



# Land or Sea:

## The ice's legal dimensions





## The legal status of Arctic sea ice in the United States and Canada

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The treatment of sea ice in USA and Canadian law has failed adequately to allocate and manage demands on Arctic sea ice among competing uses. Decision makers have generally categorized sea ice as either land or water, a binary approach that ignores its unique characteristics and the services it provides to many different users. Agency action and related litigation in the USA demonstrate sea ice user conflicts and highlight the tendency of US law to protect only one type of user at a time. In Canada, two recent Inuit Land Claims Agreement create zones that encompass sea ice. Yet both systems are beginning to acknowledge sea ice as a component of larger systems and as a resource with multiple uses and users. Both countries have the seeds of mechanisms in place to allow multiple users of sea ice to provide input on planning decisions affecting sea ice. While much work lies ahead, and none of these steps on its own clarifies the legal status of sea ice, combined they provide a modest foundation for beginning to better balance competing uses of sea ice in a warming Arctic.

Over the last quarter century, US and Canadian law have categorized sea ice inconsistently as land or water, and international law has unquestioningly treated sea ice as water in another form. These approaches no longer suffice in an era when



A photograph showing a vast pile of broken ice blocks, likely sea ice, on a sandy beach. The ice blocks are of various sizes and shapes, some appearing translucent blue. Two people are standing on the peak of the ice pile in the background. The sky is clear and blue.

# Native/Inuit Perspectives

Photo: Igor Krupnik, Gambell, Alaska, February 2009

# If the ice is broken...



<http://majikimaje.com/collection/ice/FLAG06.jpg>

At least two dozen bowhead whales are killed each spring in North Alaska from camps along the edge of shore-fast ice. Hundreds of people are on the ice hunting, towing and butchering the whales



6A5760 [RM] © www.visualphotos.com





Global Arctic Programme

# THE LAST ICE AREA

Enter WWF




© PAUL NICKLE/NATIONAL GEOGRAPHIC STOK K/WWF-CANADA

Narwhals are often found  
near the ice edge.


VISION

# Look Who Has a Plan

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Feedback


## The Last Ice Area

As the climate warms, Arctic sea ice is disappearing.

Almost every summer, the amount of remaining ice gets smaller. That summer ice is vitally important to a whole range of animals from tiny shrimp to vast bowhead whales, and to local people.

One stretch of ice is projected to remain when all other large areas of summer ice are gone. This is the Last Ice Area.

### About the Last Ice Area

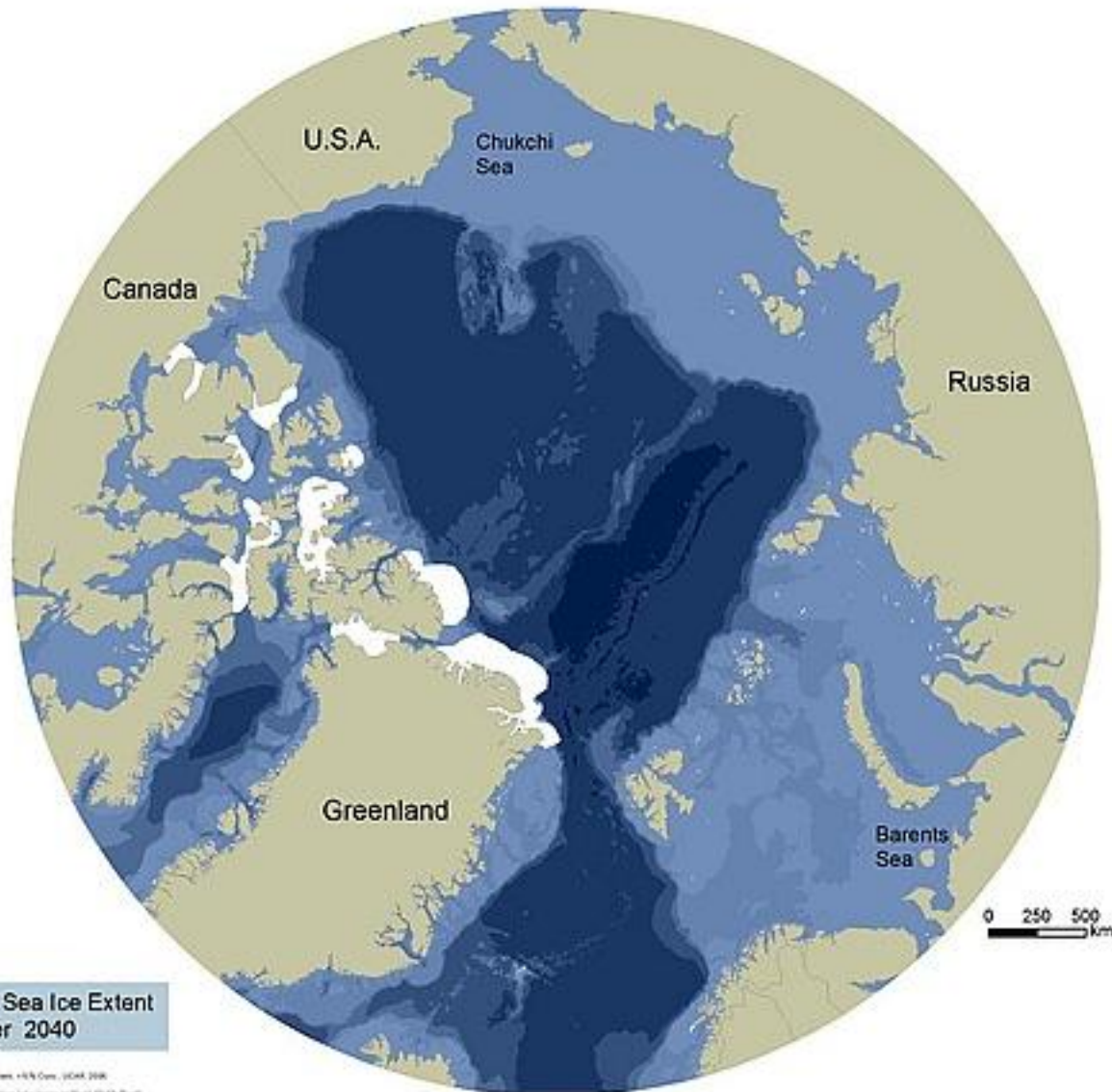


Predicted Sea Ice Extent  
September 2042

© WWF-Canada



# The WWF "Last Ice" Target Area



Produced by WWF Canada, March 15, 2010  
Data Source: Projections, September 2040, Sea Ice Index, v1.0, CC BY-NC-SA  
Projections: Scott, Peter, et al.  
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The WWF argues that the need to preserve the “Last Arctic Ice” could come in less than twenty years from now and that it is working with the Inuit Circumpolar Council and other Inuit organizations in Canada and Greenland to gain their support and leadership for the plan

© WWF / WWF Ethiopia / WWF Ethiopia / WWF Ethiopia



# Whose Ice: A Question for 2030 (or 2020)

Thin young ice with patches of open water in mid winter is the new face of the Arctic to which people have to adapt, as climate change progresses

*Photo: Igor Krupnik*

A photograph of a snowy landscape under a bright, cloudy sky. The sun is a large, glowing orb in the upper center, casting a soft light. The ground is covered in snow with some dark patches. In the distance, there are some low, dark structures or hills. The text "Thank you !" is overlaid in the center in a yellow, sans-serif font.

Thank you !